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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,416	08/11/2006	Edoardo Mazza	P/4631-22	4891
2352 7590 01/24/2008 OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			EXAMINER CHAPMAN JR, JOHN E	
			ART UNIT 2856	PAPER NUMBER
			MAIL DATE 01/24/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,416	Applicant(s) MAZZA ET AL.	
	Examiner John E. Chapman	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/9/06</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. The information disclosure statement filed June 9, 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because Fig. 3 does not include the reference sign "11" mentioned in the description on page 9, line 25. In addition, block elements 7, 8 and "11" in Fig. 3 should be labeled using an appropriate legend.

A clean copy of Fig. 7 should be submitted.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The disclosure is objected to because of the following informalities:

Page 4, line 8, the specification should be self contained and should not refer to the claims. Note that the claims may be amended, cancelled and/or renumbered. Indeed, claims 1 and 12 have already been amended.

Page 9, line 12, "10" should be --20--.

Page 12, line 21, "contrary" should be --contrast--.

Appropriate correction is required.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson et al. (5,269,181).

Regarding claim 1, Gibson teaches on page 2, line 43 to page 3, line 2, that it is known in the art to measure the flexural damping in a fiber by exciting the fiber laterally (flexural motion) at different frequencies and detecting fiber motion. While Gibson does not specifically mention a transducer excite the fiber laterally, it would have been obvious to one of ordinary skill in the art to provide a transducer to excite the fiber laterally in order to precisely control the frequency of vibration. The intended use of measuring phase delay between an input signal and an output signal of a sensor is not given any weight, since an apparatus for measuring phase delay is not

positively recited in the claim. The output signal of a capacitive sensor (see page 3, line 1, of applicant's specification) is inherently capable of being used to measure phase delay.

Regarding claim 2, it would have been obvious to mechanically couple the transducer to the fiber such that one end is deflected in a first direction.

Regarding claim 3, it is known to clamp the fiber (see column 2, lines 61-64, of Gibson).

Regarding claim 4, it is well known in the art to provide, for example, a piezoelectric actuator to induce lateral vibrations.

Regarding claim 5, it is known to clamp the fiber (see column 2, lines 61-64, of Gibson).

Regarding claims 9 and 10, it would have been obvious to one of ordinary skill in the art to test the fiber in a vertical position in order to eliminate any effect of gravity on the fiber.

Regarding claim 11, the device of DiCarlo and Williams comprises a high-vacuum cryostat furnace (see column 2, lines 52-59, of Gibson).

6. Claims 6-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson as applied to claim 1 above, and further in view of Mensah et al. (4,692,615).

Regarding claim 6, the only difference between the claimed invention and the prior art consists in measuring vibrations of the fiber using a light sensor in lieu of a capacitive sensor. Mensah teaches using an optical sensor in Fig. 1 in order to measure vibrations of a fiber (18). It would have been obvious to one of ordinary skill in the art to use the optical sensor of Mensah to measure the flexural vibrations of the fiber of Gibson.

Regarding claim 7, a laser (10) generally comprises an aperture. It would have been obvious to provide an adjustable aperture to control laser beam (12).

Regarding claims 8 and 14, Mensah discloses a laser (10).

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art.

Regarding claim 13, applicant admits on page 3, lines 5-18, that it is known to determine the phase curve of a resonant system (dynamic viscometer) wherein a vibration is induced into the system to be measured, the resonant frequency is determined, a phase curve at resonance is determined, and the slope of the phase curve at resonance is used to determine the damping coefficient. Hence, the only difference between the claimed invention and the admitted prior art consists in performing a “fast scan” over a wide range of frequencies in order to initially determine the resonant frequency of the system (dynamic viscometer). It would have been obvious to one of ordinary skill in the art to perform a “fast scan” over a wide range of frequencies in order to initially determine the resonant frequency of the system and thereby expedite the determination of the damping coefficient.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Varterasian et al. (4,653,327).

Regarding claim 13, Varterasian discloses a method for a phase curve (see Fig. 4) of a resonant system (Helmholtz resonator) wherein a vibration is induced into the system to be measured, the resonant frequency is determined, a phase curve at resonance is determined, and the slope of the phase curve at resonance is determined (see column 8, line 19-29). Hence, the only difference between the claimed invention and the prior art consists in performing a “fast

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scan” over a wide range of frequencies in order to initially determine the resonant frequency of the system (Helmholtz resonator). It would have been obvious to one of ordinary skill in the art to perform a “fast scan” over a wide range of frequencies in order to initially determine the resonant frequency of the system and thereby expedite the determination of the acoustic damping factor.

9. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E. Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John E Chapman
Primary Examiner
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